

**TRANSLATION**

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>03adi WO</b>	<b>FOR FURTHER ACTION</b>		See Form PCT/IPEA/416
International application No. <b>PCT/EP2004/013597</b>	International filing date ( <i>day/month/year</i> ) <b>01.12.2004</b>	Priority date ( <i>day/month/year</i> ) <b>05.12.2003</b>	
International Patent Classification (IPC) or national classification and IPC <b>F16H55/28</b>			
Applicant <b>ZF LENKSYSTEME GMBH</b>			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <b>5</b> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of <b>7</b> sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> <p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>			

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/EP2004/013597

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 

This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
 
  - international search (Rule 12.3 and 23.1(b))
  - publication of the international application (Rule 12.4)
  - international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):
 

the international application as originally filed/furnished  
 the description:  
 pages 1–20 \_\_\_\_\_ as originally filed/furnished  
 pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
 pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
 the claims:  
 nos. \_\_\_\_\_ as originally filed/furnished  
 nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19  
 nos.\* 1–25 \_\_\_\_\_ received by this Authority on /filed with the demand  
 nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
 the drawings:  
 sheets 1/5–5/5 \_\_\_\_\_ as originally filed/furnished  
 sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
 sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
 a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3.  The amendments have resulted in the cancellation of:
 

the description, pages \_\_\_\_\_  
 the claims, nos. \_\_\_\_\_  
 the drawings, sheets/figs \_\_\_\_\_  
 the sequence listing (*specify*): \_\_\_\_\_  
 any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4.  This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 

the description, pages \_\_\_\_\_  
 the claims, nos. \_\_\_\_\_  
 the drawings, sheets/figs \_\_\_\_\_  
 the sequence listing (*specify*): \_\_\_\_\_  
 any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V	<b>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</b>
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## 1. Statement

Novelty (N)	Claims	1–25	YES
	Claims		NO
Inventive step (IS)	Claims	1–25	YES
	Claims		NO
Industrial applicability (IA)	Claims	1–25	YES
	Claims		NO

## 2. Citations and explanations (Rule 70.7)

## 1. Reference is made to the following documents:

D1: US-A-4 593 578.

2. Document D1 is considered the prior art closest to the subject matter of claims 1 and 16. It discloses (the references between parentheses relate to D1):

2.1 a device for pressing a rack (2) against a pinion, comprising a pressure part (7) and a supporting element (4), wherein a spring element (6) disposed between the pressure part (7) and the supporting element (4) exerts the first of at least two consecutive degrees of pressure pressing the pressure part (7) against the rack (2), wherein the pressure part (7) and the supporting element (4) each have support surfaces facing each other, which in a basic position are disposed at a distance from each other.

The subject matter of claim 1 therefore differs from the known device in that the pressure part

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and the supporting element are made of metal, the support surface of the supporting element is elastic, such that the second degree of pressure is exerted as soon as the support surfaces contact each other, the pressure part and the supporting element each have second supporting surfaces which face each other and in the basic position are disposed at a distance from each other which is greater than the distance between the first supporting surfaces, and wherein the second supporting surfaces are designed in such a way that they constitute a limit stop for the movement of the pressure part.

2.2 Document D1 discloses (the references between parentheses relate to D1): a device for pressing a rack (2) against a pinion, having a pressure part (7) and a supporting element (4), wherein the pressure part (7) and the supporting element (4) each have supporting surfaces facing each other.

The subject matter of claim 16 therefore differs from the known device in that the pressure part and the supporting element are made of metal, the pressure part and the supporting element each have supporting surfaces which face each other and in the basic position contact each other, the supporting surface of the supporting element is elastic, and the pressure part and the supporting element each have second supporting surfaces which face each other, are at a distance from each other in a basic position, and constitute a limit stop

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for the movement of the pressure part.

3. The problem to be solved by the present invention is therefore understood to be that of reducing pressure part play and minimizing noise. This combination of features is not known from or suggested by the available prior art. The suggested solution is therefore inventive. Claims 1 and 16 and dependent claims 2 to 15 and 16 to 25 therefore satisfy the requirements of PCT Article 33(2) and (3).